Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Review of the Emergency Alert System	)	EB Docket No. 04-296
	)	
	)	
	)	

Comments of United States Geological Survey

Submitted By: Eliot Christian
U.S. Geological Survey
106 National Center
Reston, VA 20192
e-mail:
echristian@usgs.gov

Filed: 24 January 2006

1. The United States Geological Survey (USGS) has a long-standing and leadership role in emergency alerting, nationally and internationally. Under the Stafford Act (42 U.S.C 5201 et seq., Disaster Relief Act of 1974), the USGS Director, through the Secretary of the Interior, has delegated responsibility to issue disaster warnings "...for an earthquake, volcanic eruption, landslide, or other geologic catastrophe." USGS also has emergency alerting responsibilities for invasive species, for wildlife diseases (in conjunction with the Centers for Disease Control in the Department of Heath and Human Services and with the Animal and Plant Health Inspection Service in the U.S. Department of Agriculture), and for floods, hurricanes, and geomagnetic storms (in conjunction with the National Oceanic and Atmospheric Administration in the Department of Commerce). For those hazards and other events in which USGS has a major role, alerts and notifications are sent to other national agencies, to state emergency centers, to the news media, to infrastructure managers, and to the public in general. USGS is also the administrative host for the interagency Federal Geographic Data Committee (FGDC), established under the E-Government Act, Section 216. The FGDC has overall responsibility for the sharing of maps, imagery, and associated geospatial data on a national basis, which are crucial information resources in every emergency management situation.

I. Ubiquitous distribution must be a goal of any publicly-supported alert system

SECTION 67. COMMON PROTOCOLS, FCC PROMPT:

"Should [...] ubiquitous distribution be a goal of a digitally-based alert system?"

2. USGS Comment:

Ubiquitous distribution, whereby emergency alerts flow rapidly and simultaneously through all appropriate information conduits, must be a goal

of any publicly-supported alert system. This requirement follows from societal principles such as due diligence and fairness. To be ubiquitous in the public alerting context, any communications infrastructure must also be interoperable, sustainable, and international. And, in open societies, the envisioned ubiquitous distribution must provide mechanisms for differing levels of trust as needed for different alert types and different communications relationships. These profound challenges cannot be addressed all at once nor in any one forum, as evidenced by the lack of progress despite decades of calls to action on public alerting.

To break this impasse, governments should encourage communications providers worldwide to immediately build out "unofficial alerting" communications infrastructures using interoperable technologies based on open standards. Here, "unofficial alerting" would specifically encompass any alerting situation that is not dependent on legal and governmental issues as yet unresolved. For instance, Worldspace satellite radio now offers a CAP-based alerting facility ("Anny Network") marketed to unofficial alerters such as hotel operators. Knowing that official alerting is on a separate legal and policy track, communications providers would more rapidly develop essential standards and technologies, perhaps building on ubiquitous Internet services such as RSS and authentication mechanisms, emergent technologies using location-aware devices, or wholly new approaches we cannot envision today. In parallel, governments and citizens could use these alerting infrastructures as testbeds to inform policy debates on matters crucial to fully realizing official public alerting infrastructures such as the EAS. (The U.S. National Weather Service has been running such an "unofficial" alerting service as an experiment in the use of CAP, see http://www.weather.gov/alerts).

II. A common standard for alert messages must be adopted

SECTION 67. COMMON PROTOCOLS, FCC PROMPT:

"We seek comment on [the assertion that] a common messaging protocol must be adopted."

3. USGS Comment:

Standardizing the content of alert messages is fundamental to pursuit of the "all-hazards" approach advocated by the United States Geological Survey and other agencies involved in emergency alerting. For many reasons, it makes no sense to develop alerting systems specialized to just one type of event, nor alerting systems specialized to just one communications mode. At Kobe following the tragic tsunami of 2004, this all-hazards approach was voiced as policy in remarks by the U.S. ambassador, and standardization of alerting messages is being advocated as an essential component of national and international alert and warning capabilities.

III. CAP should be adopted as the content standard for any alert system concerned with the given event categories

SECTION 67. COMMON PROTOCOLS, FCC PROMPT:

"Should CAP be adopted as the common messaging protocol for any future digitally-based alert system?"

4. USGS Comment:

Experiences of the United States Geological Survey support the assertion that the Common Alerting Protocol (CAP) is an effective content standard that can be applied at interfaces between senders, transmitters, and receivers of alerts covering many of the common natural and man-made hazard situations. CAP should be a mandatory standard for prescribing the content of alert messages in any alert system concerning event categories specifically delineated in the standard: geophysical, meteorological, safety, security, rescue, fire, health, environmental, transport, infrastructure

(utility, telecommunication, other non-transport), and CBRNE (chemical, biological, radiological, nuclear or high-yield explosive).

IV. FCC should require CAP for EAS alerts

SECTION 67. COMMON PROTOCOLS, FCC PROMPT:

"Should we require the adoption of CAP for EAS alerts?"

5. USGS Comment:

CAP should be mandatory for EAS alerts.

V. CAP allows simultaneous distribution via disparate media while optimizing the uniformity of alert contents

SECTION 67. COMMON PROTOCOLS, FCC PROMPT:

"If CAP were to be adopted, would it allow simultaneous distribution to radio, television, and wireless media such as mobile telephones and PDAs? How would CAP be used to ensure uniformity of alerts across [...] multiple platforms?"

6. USGS Comment:

CAP is an information content standard rather than a technology standard. As such, CAP is compatible with mechanisms that accomplish simultaneous distribution to radio, television, and wireless media such as mobile telephones and PDAs. Use of the CAP content standard provides the highest achievable degree of uniformity of alerts across multiple platforms, while supporting the essential need to accommodate the different characteristics of current and future messaging media, devices, and human interfaces.